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Media Advisory

TARDEC

September 19, 2008

For Immediate Release |

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Release # 0820

TARDEC Robots Take Center Stage at 2008 West Point Engineering Expo

Encouraging Cadets to Explore the Future of Engineering

DETROIT ARSENAL, WARREN, MI ─ As part of their ongoing initiative to attract a world-class engineering and scientific workforce, U.S. Army Tank Automotive Research, Development and Engineering Center (TARDEC) associates participated in the 2008 West Point Engineering Expo Sept. 5 at the U.S. Military Academy, West Point, NY. West Point's rich tradition of producing some of the finest military leaders and exceptional engineers and scientists offered a perfect opportunity to display unmanned vehicles created by TARDEC's Joint Center for Robotics (JCR) and Robotic Systems Joint Project Office Unmanned Vehicle Center for Excellence.

"Throughout the military, we face the issue of an aging workforce. One of the ways in which TARDEC is being proactive about this challenge is by taking advantage of opportunities such as this one," explained TARDEC Director Dr. Grace M. Bochenek. "The West Point Engineering Expo allows us to start a dialogue with the Army's future force and to encourage them to consider engineering and the dynamic possibilities that a scientific research environment can hold. Through events such as this expo, as well as continuing efforts like our educational cooperative and summer internship programs, we find that we can successfully attract young men and women with the right skill sets to the engineering field."

Many West Point cadets on summer break have taken advantage of TARDEC's outreach programs to gain additional engineering expertise. One such former cadet, MAJ Jeffrey Biggans, talked about his experience as a West Point cadet more than 12 years ago, and an instructor, then MAJ Cynthia Bedell, who made a big impression.

"If I hadn't met her, I wouldn't be at TARDEC today," Biggans said. "So my hope is that I can plant a seed in a few cadets in the same way that Bedell had done for me several years ago. The expo affords us the opportunity to show TARDEC's and TACOM's relevance to the Army, which clearly resonated with the cadets and visitors, given the interest our displays generated."

This year, TARDEC associates took advantage of the excitement that surrounds the burgeoning robotics field to draw attention to their booth presentations. Researchers

responsible for developing current and future robotic technologies were on hand to share their experiences with cadets while demonstrating the capabilities of several smaller robots that are performing various risk-mitigating missions in Iraq and Afghanistan today. These missions reduce the risks posed by improvised explosive devices, including explosive ordnance disposal (EOD) and path-clearing tasks that would otherwise be performed by Soldiers, thereby keeping U.S. forces out of harm's way. The TARDEC demonstration included the Foster-Miller Inc. TALON® and iRobot® PackBot®.

Currently in use supporting *Operations Enduring* and *Iraqi Freedom*, TALON is used for a variety of missions, including EOD, engineer support, reconnaissance and surveillance. It gives Soldiers significant standoff ability to identify and inspect potential improvised explosive devices at a safe distance. TALON weighs between 115 to 140 pounds and has two infrared cameras, one color zoom camera, microphone, speaker and manipulator arm with gripper. TALON has a line-of-sight range of up to 800 meters and has been effectively deployed against a wide range of insurgent explosive devices.

Another supporting player is the extremely versatile PackBot 510 EOD robot, whose missions include EOD, route clearance, engineer support, reconnaissance and surveillance. In addition, it can be controlled with two "puck" controllers or with a more Soldier-friendly PlayStation® 2-like controller that significantly shortens required field training time. PackBot's versatility stems from interchangeable modular payload capabilities that allow PackBot to be quickly and easily adapted to a variety of missions. With patented "flippers" capable of continuous 360-degree rotation for traversing rocks, mud, snow, gravel and other tough terrain, PackBot easily climbs stairs, rolls over rubble and navigates narrow, twisting passages.

Note: There are 2 photos that can be used with this release. Caption information follows. To download the photo, go to http://www.tardec.info/pressreleases/.

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Photo Captions:

TARDEC-PR-0820_1_Interns.jpg
As part of an internship two West Point cadets worked in TARDEC's Robotics Programs during their summer break. From left, TARDEC Electrical Engineer Shanna Render, TARDEC Intern Andrew Kosinski, West Point Cadet David Fobar, TARDEC Co-Op Student Annette Palazzolo and West Point Cadet Christina Veney attended the National Defense Industry Association of Michigan Robotics Conference in August. (U.S. Army TARDEC photo by Meg Williams)

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TARDEC-PR-0820_2_R-Gator.jpg

TARDEC Intern Andrew Kosinski discusses the various features of the iRobot®-John Deere R-Gator with West Point Cadet James Taylor at the 2008 West Point Engineering Expo Sept. 5. The expo allowed TARDEC to start a dialogue with the Army's Future Force and encourage them to consider engineering and the dynamic possibilities that a scientific research environment can hold. (U.S. Army TARDEC photo by Todd Sankbeil)

TARDEC is the Nation's laboratory for advanced military ground systems and automotive technology. A leading technology integrator for the U.S. Army Materiel Command's Research Development and Engineering Command (RDECOM), TARDEC is headquartered at the Detroit Arsenal in Warren, MI, located in the heart of the world's automotive capitol. TARDEC is a major element of RDECOM and partner in the TACOM Life Cycle Management Command. As a full life-cycle engineering support provider-of-first-choice for all DOD ground combat and combat support weapons and vehicle systems, TARDEC develops and integrates the right technology solutions to improve Current Force effectiveness and provide superior capabilities for the Future Force. TARDEC's technical staff leads research in ground vehicle survivability; mobility/power and energy; robotics and intelligent systems; maneuver support and sustainment; and vehicle electronics and architecture. TARDEC develops and maintains ground vehicles for all U.S. Armed Forces and numerous federal agencies.

For additional information about TARDEC's forthcoming developments and other technologies, please contact Mike Roddin at Mike.Roddin@us.army.mil.